

Site: _____
Break: 3.2
Other: _____

ADEM

3 2 00002



ALABAMA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

George C. Wallace
Governor

November 26, 1985

3493

1751 Federal Drive
Montgomery, AL
36130
205/271-7700

MEMORANDUM

TO: Mr. Bernard Cox

FROM: Timothy S. Forester *JST*

RE: Sediment sampling in the Tombigbee River and a
slough in the vicinity of Ciba-Geigy at McIntosh, AL.

Field Offices:

P.O. Box 953
Decatur, AL
35602
205/353-1713

Unit 806, Building 8
225 Oxmoor Circle
Birmingham, AL
35209
205/942-6166

On April 17-18, 1985, Mr. Marion Bertolotti, Field Operations, and the writer collected sediment samples that you requested from the Tombigbee River and a slough near Ciba-Geigy's Plant at McIntosh, Alabama. Sample site locations are indicated on the attached map.

Prior to sampling, the writer contacted Mr. Delbert Hicks of EPA's Environmental Lab at Athens, Georgia to discuss what would be the best method of sampling sediments for organics and metals analyses. It was decided that a subsample of each of three Ekman dredge samples collected at each site would be sufficient. The procedure included the use of a .25ft.² stainless steel Ekman dredge for sediment collection. A sample was brought to the water's surface where the top of the dredge was opened and a subsample of the sediment was taken with a stainless scoop and placed in a stainless steel bucket. Two more subsamples were collected in the same manner and placed into the bucket with the first. The scoop was used to mix the sample until the mixture was homogeneous. Some of this mixture was placed in a hexane rinsed glass pint jar for organics analyses. More of this mixture was placed into a plastic bag for metals analyses. The dredge, bucket and scoop were washed and hexane rinsed after each site was sampled.

Sediment analyses consisted of an organic scan which included base/neutral compounds, acid compounds, volatile compounds, organochlorine pesticides, organophosphorus pesticides and PCB's. Metal analyses consisted of Al, Cd, Cr, Cu, Fe, Hg, Mg, Mn, Na, Ni, Pb, and Zn. Results of analyses are listed in Table #1 and #2.

As you can see from Table #1, 21.6 ug/g of hexachlorobenzene was found at site CB-2. All sites had some DDT, DDE and/or DDD except for station CB-6, which was in the river upstream of the slough. No compounds were detected at site CB-6. All other compounds tested were less than detectable at the other five sites. Metal concentrations were generally higher in the slough when compared to the river stations.

TSF/ed

4358 Midmost Drive
Mobile, AL
36608
205/343-7841

3 2 00003

TABLE #1

Sediment Sampling in the Tombigbee River
Near Ciba-GEIGY; McIntosh, AL.

Organic Analyses

4/17-18/1985

Parameter; (µg/g)

Station	Hexachlorobenzene	4,4'DDD	4,4' DOE	4,4' DDT	DDD o,p	DOE o,p	DDT o,p
B-1	_____	.02	.03	.02	.02	.07	.03
B-2	21.6	< .01	.02	< .01	< .01	.02	< .01
B-3	_____	.11	0.17	.06	.04	0.22	< .01
B-4	_____	.03	0.11	.03	.04	0.18	< .01
B-5	_____	.03	.07	.04	.01	< .01	< .01
B-6	_____	---	---	---	---	---	---

TABLE #2

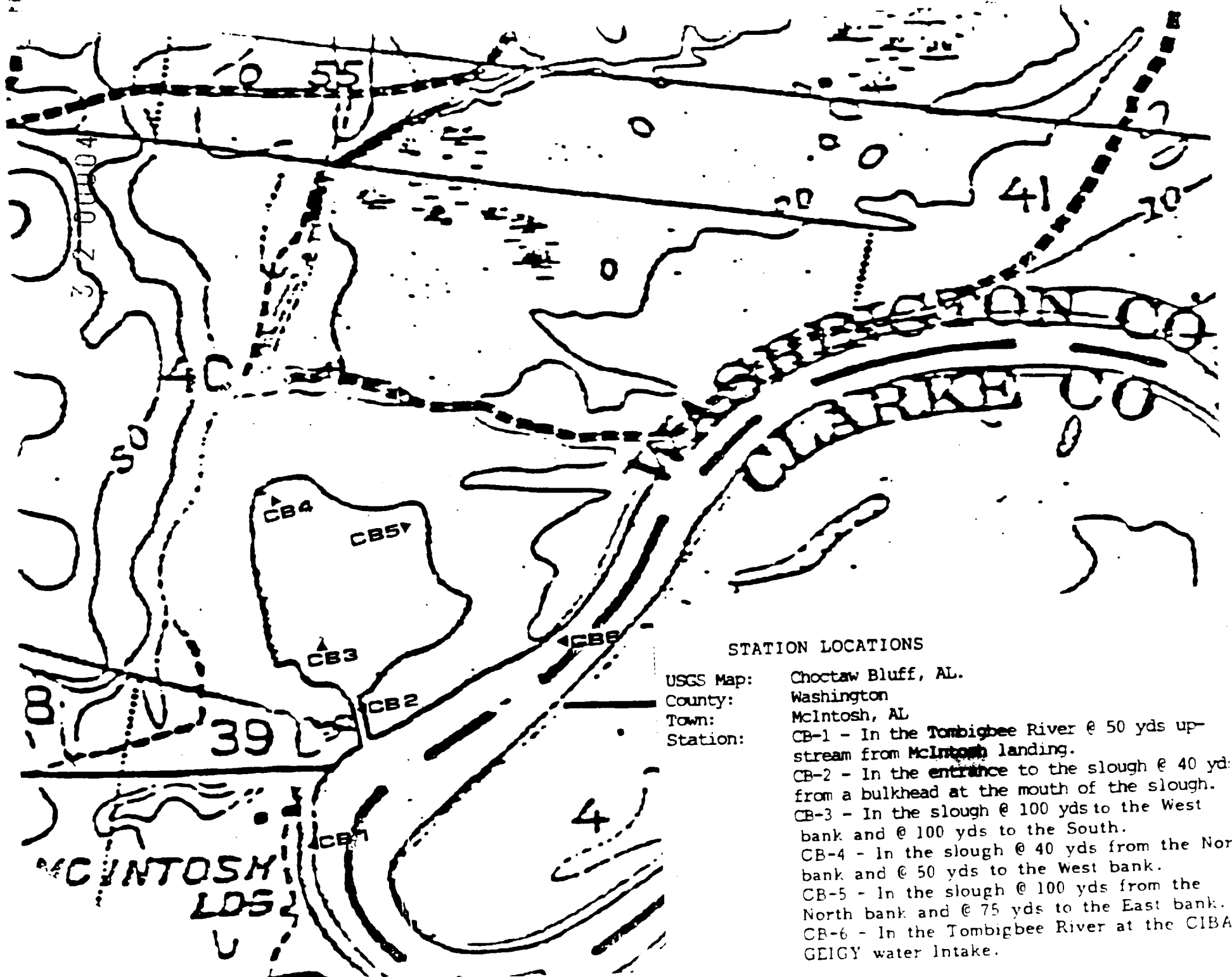
Sediment Sampling in the Tombigbee River
Near Ciba-GEIGY; McIntosh, AL

Metal Analyses

4/17-18/1985

Parameter; (µg/g)

Station	Al	Cd	Cr ^T	Cu	Fe	Hg	Mg	Mn	Na	N	Pb	Zn
CB-1	8,000	< 5	23	< 5	18,000	< .5	1,500	436	240	18	< 50	45
CB-2	8,000	< 5	27	8	18,000	4	700	91	3,200	20	< 50	123
CB-3	11,000	< 5	33	18	25,000	29	1,000	168	720	20	< 50	108
CB-4	30,000	< 8	73	41	49,000	12	2,800	350	2,100	42	97	336
CB-5	27,000	< 5	58	37	47,000	14	2,800	367	1,700	37	50	214
CB-6	5,000	< 5	14	5	12,500	< .5	1,000	263	245	16	< 50	38



STATION LOCATIONS

USGS Map: Choctaw Bluff, AL.
 County: Washington
 Town: McIntosh, AL
 Station:

- CB-1 - In the Tombigbee River @ 50 yds upstream from McIntosh landing.
- CB-2 - In the entrance to the slough @ 40 yds from a bulkhead at the mouth of the slough.
- CB-3 - In the slough @ 100 yds to the West bank and @ 100 yds to the South.
- CB-4 - In the slough @ 40 yds from the North bank and @ 50 yds to the West bank.
- CB-5 - In the slough @ 100 yds from the North bank and @ 75 yds to the East bank.
- CB-6 - In the Tombigbee River at the CIBA GEIGY water intake.